

REMARKS

The Examiner is thanked for the thorough examination of the present application. The Office Action, however, has continued to reject all claims on the same bases that were set forth in the previous Office Action. Applicant continues to disagree with these rejections for at least the same reasons already argued by Applicant. In this regard, Applicant repeats and realleges all distinctions set for in Applicant's previous response. In addition, Applicant sets for the following additional remarks.

Rejections Under 35 U.S.C. § 112

The Office Action rejected claims 4, 6, 8, 13, and 15 as allegedly being indefinite for using the term "about". In this regard, the Office Action stated that the term was a "relative" term and that that rendered the claim indefinite. Applicant has elected to accommodate the rejection and amend the claims to remove this term, thereby rendering the rejections moot. Applicant does note, however, that the Examiner's position reflects a misunderstanding of the law, as relative terms are perfectly acceptable. The relevant question for analysis is whether, based on the teachings of the specification and understanding of persons skilled in the art, a person skilled in the art would have a sufficient understanding of the meaning of the term, in the context of the claim language. Applicant submits that that standard IS satisfied in this application. Furthermore, the rejection was deficient as it provided no evaluation of the specification and did not state WHY one skilled in the art would not be able to ascertain a reasonable understanding of those claims, using that term.

Indeed, the Patent Office routinely issues patents with the term "about" in the claims. In this regard, the undersigned performed a search of the U.S. Patent & Trademark Office's Web site to see how many patents it issued with this term in the claims; there were numerous. Indeed, on only the date of August 14, 2007 (just that one day), the U.S. Patent & Trademark issued over fifty (50) patents which had the term "about" in the claims. These include U.S. patents

- 7,257,804,
- 7,257,790,
- 7,257,783,
- 7,257,767,
- 7,257,735,
- 7,257,675,
- 7,257,610,
- 7,257,569, and
- 7,257,557,

just to list a few. This, alone, reflects the impropriety of the rejection.

Furthermore, as an administrative agency, and pursuant to the Administrative Procedures Act, the U.S. Patent & Trademark Office must treat all applicants fairly and indiscriminately. In rejecting claims 4, 6, 8, 13, and 15, the present Office Action is treating the present Applicant unfairly with respect to the numerous other Applicants which have been awarded patent using the very claim term that the present Office Action states is statutorily improper; clearly it is not.

Discussion of Rejections Under 35 U.S.C. § 102

On a substantive basis, the Office Action has rejected claims 1-2, 5-18, and 21-28 under 35 U.S.C 102(b) as allegedly anticipated by DeFreitas et al. (US Patent

4,053,711). Applicant respectfully requests reconsideration and withdrawal of the rejections for at least the reasons that follow.

Claim 1 recites:

1. A multi-channel surround sound expansion method comprising the steps of:
reading a stereo sound signal including a left sound signal and a right sound signal;
expanding said stereo sound signal into a Front L channel, a Front R channel, a Front M channel, a Rear L channel and a Rear R channel sound signals; performing a sound reverberation operation on sound signals of said Front L channel and said Front R channel or said Rear L channel and said Rear R channel to generate sound with echo/reverberation;
delaying said Rear L channel and Rear R channel sound signals for a first time value; and
advancing said Front M channel sound signal for a second time value.

(*Emphasis added.*) Claim 1 patently defines over DeFreitas for at least the reason that DeFreitas fails to disclose the features emphasized above.

In fact, DeFreitas specifically teaches away from “advancing said Front M channel sound signal for a second time value”. In this regard, the Office Action cited the Abstract and other portions of DeFreitas as allegedly disclosing the claimed feature of “advancing said Front M channel sound signal for a second time value.” In fact, the Abstract specifically states:

“... The system applies the stereo input signals to a front pair of speakers **substantially without alteration** while reverberation is added to the stereo input signals for application to the rear speakers ...”

Where claim 1 expressly claims “advancing said Front M channel sound signal for a second time value,” DeFreitas teaches applying a signal to front speakers “substantially without alteration.” This is a clear teaching away from the claimed embodiments, and warrants withdrawal of the rejection.

By way of further explanation, conventionally, the outputs of 5.1 channels can be divided into six sound fields including a front left (Front L) channel, a front right (Front R) channel, a rear left (Rear L) channel, a rear right (Rear R) channel, a middle (M) channel and a super base channel. The front M channel of claim 1 is a "front middle/center channel". The mean of the left sound signal and the right sound signal $(L+R)/2$ is outputted to the front M channel.

The "optional left front channel " disclosed by DeFreitas et al. is functionally and substantially different from the "front middle channel" of this application. The optional left front channel of DeFreitas et al. acts as a left surround by mixing sounds from the right and left stereo input signals on lines 40R and 40L (col. 6 lines 63~65), and is not equivalent to the center channel of the present invention.

In page 4 of Office Action, as described by examiner, the optional left front channel combines an undelayed left front channel signal and a delay signal 142 L (Fig. 5), which results in a "smaller delay. In this application, the Front M channel sound signal is advanced by a second time value to emphasize the front sound field and the human voices, thereby, producing a 3D sound field surrounding a listener. That means, the front middle channel signal is produced earlier, not delayed. The surrounding result to a listener due to a smaller delay of DeFreitas and advancing signal of the present invention are totally different to anyone skilled in the art. The terms "delay" and "advance" are polar opposites of each other. Thus, DeFreitas et al. expressly teaches away from the claimed embodiments.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference."

Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). DeFreitas et al. fails to teach that only L and R channel are delayed by a first time value, and the front middle channel is not delayed but “advanced” by a second time value. For at least this reason, the rejection of claim 1 is misplaced and should be withdrawn.

As all remaining claims depend from claims 1, all rejections should be withdrawn.

Any Ensuing Office Action Should be Non-FINAL

Claim 1 is still in its original form. Upon withdrawal of the outstanding rejections (for at least the foregoing reasons), all claims should be allowed. Should an ensuing Office Action be mailed, advancing new rejections, should be made non-FINAL, as any new rejections will not have been necessitated by any amendments made herein.

Discussion of Rejections Under 35 U.S.C. § 103

The Office Action has also rejected claims 3-4 under 35 U.S.C 103(a) as allegedly unpatentable over DeFreitas et al. (US Patent 4,053,711) and in view of Greenberger et al. (USPN 5,708,719). Claims 19-20 stand rejected under 35 U.S.C 103(a) as allegedly unpatentable over DeFreitas et al. (US Patent 4,053,711) and in view of Miles et al. (USPN 5,610,986).

First, these rejections should be withdrawn for at least the reason that claims 3-4 and 19-20 depend from allowable claim 1. In addition, and as a separate and independent basis for the patentability of these claims, Applicant submits that the combination of Greenberger or Miles with DeFreitas does not render the claims obvious.

In this regard, the Office Action combined Greenberger with DeFreitas to reject claims 3-4 the claims on the solely expressed basis that "it would have been obvious ... in order to create a realistic sound effect." (see e.g., Office Action, p. 9) The Office Action also combined Miles with DeFreitas to reject claims 19-20 on the expressed basis that "it would have been obvious ... in order to provide improved sound imaging and distribution characteristics of the audio system." (see e.g., Office Action, p. 10).

These rationales are both incomplete and improper in view of the established standards for rejections under 35 U.S.C. § 103.

In this regard, the MPEP section 2141 states:

Office policy has consistently been to follow Graham v. John Deere Co. in the consideration and determination of obviousness under 35 U.S.C. 103. As quoted above, the four factual inquires enunciated therein as a background for determining obviousness are briefly as follows:

- (A) Determining of the scope and contents of the prior art;
- (B) Ascertaining the differences between the prior art and the claims in issue;
- (C) Resolving the level of ordinary skill in the pertinent art; and
- (D) Evaluating evidence of secondary considerations.

...

BASIC CONSIDERATIONS WHICH APPLY TO OBVIOUSNESS REJECTIONS

When applying 35 U.S.C. 103, the following tenets of patent law must be adhered to:

- (A) The claimed invention must be considered as a whole;
- (B) The references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination;
- (C) The references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention and
- (D) Reasonable expectation of success is the standard with which obviousness is determined.

Hodosh v. Block Drug Co., Inc., 786 F.2d 1136, 1143 n.5, 229 USPQ 182, 187 n.5 (Fed. Cir. 1986).

The foregoing approach to obviousness determinations was recently confirmed by the United States Supreme Court decision in *KSR INTERNATIONAL CO. V. TELEFLEX INC.* ET AL. 550 U.S. ____ (2007)(No. 04-1350, slip opinion, p. 2), where the Court stated:

In *Graham v. John Deere Co. of Kansas City*, 383 U. S. 1 (1966), the Court set out a framework for applying the statutory language of §103, language itself based on the logic of the earlier decision in *Hotchkiss v. Greenwood*, 11 How. 248 (1851), and its progeny. See 383 U. S., at 15–17. The analysis is objective:

"Under §103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented." *Id.*, at 17–18.

Simply stated, the Office Action has failed to at least (1) ascertain the differences between prior art and the claims in issue; and (2) resolve the level of ordinary skill in the art. Furthermore, the alleged rationale for combining the two references embodies clear and improper hindsight rationale. For at least these additional reasons, Applicant submits that the rejections of claims 3-4 and 19-20 are improper and should be withdrawn.

CONCLUSION

Any other statements in the Office Action that are not explicitly addressed herein are not intended to be admitted. In addition, any and all findings of inherency are traversed as not having been shown to be necessarily present. Furthermore, any and all findings of well-known art and official notice, or statements interpreted similarly,

should not be considered well known for at least the specific and particular reason that the Office Action does not include specific factual findings predicated on sound technical and scientific reasoning to support such conclusions.

In light of the foregoing amendments and for at least the reasons set forth above, Applicant respectfully submits that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that the now pending claims 1-28 are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned at (770) 933-9500.

No fee is believed to be due in connection with this amendment and response to Office Action. If, however, any fee is believed to be due, you are hereby authorized to charge any such fee to deposit account No. 20-0778.

Respectfully submitted,

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